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8/236/62/000/001/005/007  
D207/D307

AUTHOR:

Shilcyna, A.Yu.

TITLE:

Combined investigations of thin layers of cadmium telluride. IV. Optical properties

SOURCE:

Akademiya nauk Litovskoy SSR. Trudy. Seriya B,  
no. 1(28), 1962, 63-72

TEXT: This paper is a continuation of the combined investigation of thin layers of cadmium telluride (see Parts I-III). The absorption coefficient and the refractive index of CdTe layers were measured in the region  $0.4 - 5.5 \mu$  at temperatures from  $-135^\circ$  to  $+180^\circ\text{C}$ . The forbidden band width, determined from the position of the long-wavelength absorption edge ( $0.845 \mu$ ) was  $1.48 \text{ eV}$  at room temperature and its temperature coefficient was  $-3.8 \times 10^{-4} \text{ eV/deg}$ . Extrapolation of the dispersion (refractive index) spectrum gave the refractive index for the zero frequency:  $n_0 = 2.62$ . The temperature coefficient of the refractive index was  $2.0 \times 10^{-4} \text{ deg}^{-1}$  at  $\lambda = 1.2 \mu$  where layers were transferred. The experimental values of

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D207/D307

Combined investigations ...

the temperature coefficients of the forbidden band width and of the refractive index agreed satisfactorily with theory. Acknowledgement is made to Professor P.M. Brazdzhunas for reading the manuscript and for his valuable remarks. There are 6 figures.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk Litovskoy SSR (Institute of Physics and Mathematics, Academy of Sciences, LithSSR)

SUBMITTED: April 15, 1961

Card 2/2

ACCESSION NR: AP4011777

S/0181/64/006/001/0313/0314

AUTHORS: Semenov, Ya. A.; Shileyka, A. Yu.

TITLE: Effect of pressure on the width of the forbidden zone in lead sulfide

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 313-314

TOPIC TAGS: pressure effect, forbidden zone, lead sulfide, forbidden zone width, anomalous temperature coefficient, temperature coefficient, direct optical process, thermal expansion, current carriers, free current carriers, transmission spectrum, electron, phonon, electron phonon interaction.

ABSTRACT: The authors have investigated the cause of the anomalous temperature coefficient (positive) for change in the width of the forbidden zone in PbS. (The coefficient is negative for most semiconductors.) They have studied the effect of pressure by direct optical processes, using displacement of transmission spectra under the effect of pressure. Four samples of natural single crystals of PbS were used. They were tested at room temperature under pressures ranging from atmospheric to 3000 kg/cm<sup>2</sup>. The results are shown in Fig. 1 on the Enclosure. The displacement is reversible. This means that the change did not give rise to fractures and that the temperature was nearly constant. The authors conclude that the

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ACCESSION NR: AP4011777

thermal expansion of the crystals is the important factor in the observed results and that changes in interaction between electrons and phonons have but insignificant effect. However, this effect is positive, in contrast to the sign for most semiconductors. It is possible that the decrease in transmission at 3.4-3.6 microns, observed with a temperature increase in all investigated samples of PbS, may be due to increased absorption of free current carriers. Orig. art. has: 1 figure and 1 formula.

ASSOCIATION: Institut fiziki i matematiki AN Lit. SSR, Vil'nyus (Institute of Physics and Mathematics, AN Lit. SSR)

SUBMITTED: 26Jul63

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: PH

NO REF SOV: 000

OTHER: 005

Card 2/3 2

L 30079-55 EWT(m)/EWA(d)/T/EWP(t)/EWF(k)/EWP(b) IJP(c) JD/HW

ACCESSION NR: AT5002021

S/2910/64/004/003/0389/0397

31

28

B+

AUTHOR: Barshauskas, K. M. (Baršauskas, K.); Bendoryus, R. A. (Bendorius, R.);  
Semenov, Ya. A. (Semionovas, J.); Shileyka, A. Yu. (Sileika, A.)

TITLE: Effect of hydrostatic pressure on the transmission spectrum of lead sulfide

SOURCE: AN LitSSR. Litovskiy fizicheskiy sbornik, v. 4, no. 3, 1964, 389-397

TOPIC TAGS: lead sulfide, transmission spectrum, forbidden zone, semiconductor,  
temperature coefficient, hydrostatic pressure

ABSTRACT: The authors investigated the effect of pressure (change of the lattice constant) on the width of the forbidden zone in PbS as well as the change in the width of the forbidden zone as a function of temperature ( $\partial E / \partial T$ )<sub>P</sub>. The investigation was carried out by a study of the transmission spectra of PbS at different pressures. Knowing ( $\partial E / \partial P$ )<sub>T</sub> it is possible to calculate the role of the width of the forbidden zone. The article also describes a high pressure chamber for optical measurements (see Fig. 1 of the Enclosure). The pressure in the chamber was measured with a manganin manometer and optical measurements were carried out by means of an IKS-12 infrared spectrometer. The samples were 0.17 - 0.50 mm thick plates of natural galena. The investigated single crystal specimens were the n-type. The transmission spectrum for a natural PbS single crystal at differ-

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L 30079-65

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ACCESSION NR: AT5002021

ent pressures is shown in Figure 2 of the Enclosure. The pressures were as high as 3000 kg/cm<sup>2</sup>. From the rate of change in the edge of the transmission spectrum with pressure toward longer wavelengths, the coefficient of change of the forbidden zone with pressure was found to be  $(\partial E_g / \partial P)_T = (9.5 \pm 0.8) \cdot 10^{-6}$  ev·cm<sup>2</sup>/kg. On the basis of the results obtained, the possible causes for the positive temperature coefficient of the forbidden zone are outlined. With increasing pressure, an increased absorption was observed which is due to free carriers. "The authors are grateful to V. B. Tolutis for furnishing the natural PbS single crystals for the optical measurements." Orig. art. has 3 formulas, 3 figures and 1 table.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk Litovskoy SSR (Physics and mathematics institute, Academy of sciences, Lithuanian SSR); Kaunaskiy politehnicheskiy institut

Kharkov Institute (Kiev Polytechnic Institute)

SUBMITTED: 25 Dec63

ENCL: 02

SUB CODE: 88

NO REF SOV: 093

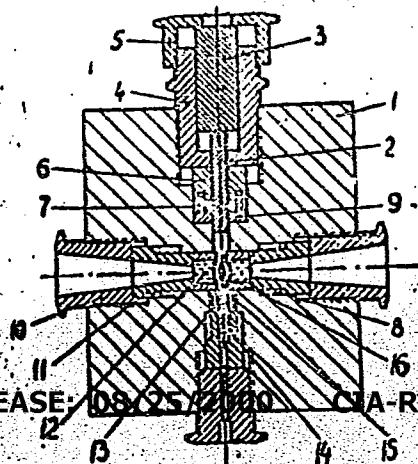
OTHER: 015

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L 30079-65

ACCESSION NR: AT5002021

ENCLOSURE: C1



APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001549420011-4

Figure 1. Schematic view of a high pressure chamber:  
1 - housing; 2-piston; 3- guide; 4, 10-grip nut; 5- lock nut; 6, 11- pressure rings;  
7,8- gaskets; 9- carrier ring; 12- fuzed quartz window; 13- manganin; 14- electric  
input; 15- crystal holder; 16- crystal.

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ACCESSION NR: AT5002021

ENCLOSURE: 02

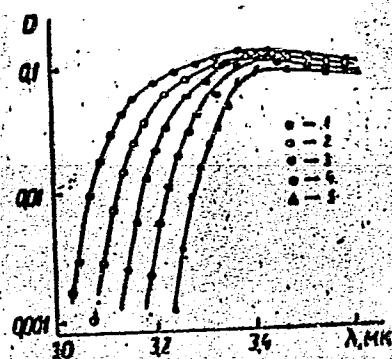


Figure 2. Transmission spectrum of natural PbS single crystals at different pressures:  
1- 1, 2- 700, 3- 1400, 4- 2000 and 5- 2750 kg/cm<sup>2</sup>.

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L 11923-66 EWT(d)/EWT(1)/EWT(m)/ETC(F)/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/EWP(k)/EWP(h)  
ACC NR: AT5028696 IJP(c) SOURCE CODE: UR/2910/64/004/004/0529/0536

RDW/JD/VV/GG 44 55  
AUTHOR: Babonas, G. A. Zakarka, A. B.; Gircene, V. L. (Girciene, V.);  
Kavalyauskas, Yu. F. (Kavaliauskas, J.); Shileyka, A. Yu. (Sileika, A.)

ORG: Institute of Physics and Mathematics, Academy of Sciences Lithuanian SSR  
44 55

TITLE: Effect of temperature and pressure on the fundamental absorption edge of cadmium telluride 21, 44, 55

SOURCE: AN LitSSR. Litovskiy fizicheskiy sbornik, v. 4, no. 4, 1964,  
529-536

TOPIC TAGS: cadmium telluride, absorption edge, forbidden zone width  
21, 44, 55

ABSTRACT: The effect of hydrostatic pressure up to 2400 kg/cm<sup>3</sup> on the absorption spectrum of CdTe crystals was first studied at room temperature. The coefficient of variation of the forbidden gap width with pressure ( $\partial E_g / \partial P$ ) was found to be  $8.0 \pm 0.4 \times 10^{-6}$  eV cm<sup>2</sup>/kg. It was determined from the rate of shift of the fundamental spectral absorption edge toward shorter wavelength with increasing pressure. According to temperature studies conducted in the 120-480°K range, the forbidden gap width of cadmium telluride  $E_g = (1.59 - 4.6 \times 10^{-4} T)$  eV. Comparison

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ACC NR: AT5028696

of experimental results with theoretical results shows that in CdTe the variation of forbidden gap width with temperature is chiefly due to a variation in the interaction of electrons with optical phonons, whereas the effect of thermal expansion of the crystal is nearly one order of magnitude smaller. The authors are grateful to V. B. Tolutis who kindly supplied the CdTe crystals for optical measurements. Orig. art. has 7 figures, 6 formulas.

SUB CODE: 20/ SUBM DATE: 18Jan64/ ORIG REF: 004/ OTH REF: 017

PC  
Card 2/2

L 8591-66 EWT(1)/EWT(m)/EWG(m)/T/EWA(c)/EWP(b)/EWA(m)-2/EWP(t) IJP(c)

ACCESSION NR: AP5019899 RDW/GG/AT/WW/JD UR/0181/65/007/008/2571/2573

AUTHOR: Krishchunas, V. Yu.; Mikal'kevichus, M. P.; Shileyka, A. Yu.

TITLE: Pressure dependence of the intrinsic absorption edge of single-crystal

selenium

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2571-2573

TOPIC TAGS: selenium, single crystal, pressure effect, absorption edge, electron

interaction, crystal lattice vibration

ABSTRACT: This is a continuation of earlier work (Liet. fiz. rinkinys v. 4, 543, 1964) dealing with the temperature dependence of the absorption edge. Since the shift of the absorption edge can be brought about either by changes in the interatomic distances (which result from pressure changes), or by changes in the interaction between the electrons and the lattice vibrations, the present study is devoted to a separate investigation of the two factors. Trigonal selenium was tested in polarized light up to pressures of  $4430 \text{ kg/cm}^2$ . Single-crystal plates grown from the gas phase were investigated in a high-pressure chamber with quartz windows. The absorption coefficient was calculated with allowance for multiple reflection of the light in the samples, but no allowance was made for the dependence of the reflection coefficient on the pressure. Similar results were obtained for

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perpendicular and parallel polarization, with the absorption spectrum shifting toward the longer wavelengths with increasing pressure, accompanied by noticeable change in the slope of the curves. The absorption decreases exponentially with increasing energy of the light quantum, satisfying the relation

$$K = K_{\infty}[1 + \exp \alpha (E_g - hv)]^{-1}$$

where  $K_{\infty}$  is the maximum value of the absorption coefficient for the trigonal selenium ( $K_{\infty} = 2 \times 10^5 \text{ cm}^{-1}$ ),  $\alpha$  is the slope of the absorption edge,  $(4.1 \pm 0.3) \times 10^{-3}$ , and  $(3.0 \pm 0.3) \times 10^{-3} \text{ ev}^{-1} \text{ kg}^{-1} \text{ cm}^2$  for  $E \perp C$  and  $E \parallel C$ , respectively, and  $E_g = 1.92$  and  $2.03 \text{ ev}$  for perpendicular and parallel polarization, respectively. The values obtained for the compressibility of selenium agree well with those obtained earlier by others. The results indicate that in trigonal selenium the principal role in the temperature variation of the width of the forbidden band is played by the change in the interaction between the electrons and the lattice vibrations. Orig. art. has: 1 figure and 2 formulas.

44,55

ASSOCIATION: Vil'nyusskiy gosudarstvennyy universitet im. V. Kapsukasa (Vil'nius State University); Institut fiziki i matematiki AN LitSSR, Vil'nius (Institute of Physics and Mathematics AN LitSSR)

44,55

Card 2/3

"APPROVED FOR RELEASE: 08/25/2000

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L 8591-66  
ACCESSION NR: AP5019899

SUBMITTED: 12Apr65  
NR REF SOV: 002

ENCL: 00  
OTHER: 005

SUB CODE: SS

jw  
Card 3/3

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001549420011-4"

SHILEYKA, V. Yu., inzhener.

Tile-drainage in the Lithuanian S.S.R. Gidr. i mel. 8 no.12:27-  
36 D'56. (MIRA 10:1)  
(Lithuania-Drainage)

SHILEYKA, V. Yu., Candidate Agric Sci (diss) -- "Damage to covered drainage made of ceramic and concrete pipe and measures to avoid and repair it". Kaunas, 1959. 24 pp (Min Agric Lithuanian SSR, Lithuanian Agric Acad), 130 copies (KL, No 25, 1959, 138)

SHILEY KENS, 1.5.

P. 2

SOV/77-2-15/18

23(4) 23 (5)

**AUTHOR:** Lyslikov, K.S.  
**TITLE:** Suceesses of Soviet Electrophotography (Uspekhi sovetskoj elektronofotografii) A Scientific and Technical Conference on Questions of Electrography (Nauchno-tekhnicheskaya konferentsiya po voprosam elektronografii).

**PERIODICAL:** Zhurnal nauchnoj i prikladnoj fotografi i kinematografii. 1959, Vol. 4, Nro 2, pp 149-152 (USSR)

**ABSTRACT:** This is an account of a scientific and technical conference on electrography, the first to be held in the Soviet Union and abroad.

In the Soviet Union and abroad, in December 1958 by the Soviet Council in Vil'nyus on December 1-6, 1958 (Council for Nauchnoe khozyaystvo Litovskoy SSR (Council for National Economy of Lithuania SSR), the Gosudarstvennyy nauchno-tehnicheskiy komitet Sovetskogo ministrstva Litovskoy SSR (State Scientific and Technical Committee of Lithuania SSR) and the Council of Ministers of Lithuania SSR); and the Council of Ministers of the Lithuanian SSR; the Rauchno-issledovatel'skiy institut elektrografii (Scientific Research Institute of Electrography).

The conference attended by over 300 scientific workers was opened by the Deputy Chairman of the Council for National Economy of the Lithuanian SSR P.A. Kul'vers, after which the director of the Institute for Electrography, I.I. Zhilevich, reviewed the state and prospects for development of electrography in the USSR. He stated that research in this field should be carried out along the following lines: a) a search for new photo-active materials with high dark resistance; b) placement of photoconductive materials in the internal photoeffect; c) development of photoconductor-based devices; d) development of the theory of the electrophotographic process. E.G. Lyslikov (speaking also G. I. Topova) gave a report in which he succeeded determining the light sensitivity of electrophotographic layers in GCT units. M.Z. Privalova (speaking also for I.I. Zhilevich, L.I. Livanov, K.N. Sharpen, H. I. Kalininskaya and O.I. Sverdlova) reported on her research on the sensitization of a semiconductor in electrophotographic layers. V.I. Pridkin gave a report on highly sensitive electrophotographic layers and an electrophotocopying device and interest electrography. He also gave a report on the formation process of the electrographical image on the basis of the electron microscope. He also determined the design of an electron microscope for determining sensitivity by the relaxation period of a charge on the surface of the layer, and the circuit of an electron photographic copying device. And so on, finished designing the latter and then spoke on the mechanics and kinetics of the development of the latest electrophotographic image in liquid developers.

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SOV/77-4-2-1578

**Successes of Soviet Electrophotography: A Scientific and Technical Conference on Questions of Electrography**

K.N. Vinogradov described some of the features of the cascade and liquid methods of electrophotographic development. Yu.Ye. Karpensko developed a report to the criterion of light sensitivity of the electrophotographic process. After the reports, a discussion took place on methods of determining the light sensitivity of electrophotographic layers. N.N. Chernyshev spoke on the prospects of developing polymeric processes using electric and magnetic forces. O.V. Gromov (speaking also for I.I. Zhilevich, A.I. Sushchik, V.A. Gordoyev, V.S. Pauluk and Yu.I. Kavalayev) reported on the development of electrophotographic reproducing equipment. A.S. Pausha (speaking also for N. Burtkauks) reported on the use of electrographic methods in recording oscillographs and other recording instruments.

V.P. Murchenko (speaking also for L.M. Linin) spoke on the possibility of electrophotographically recording images from electron-beam tube. I.S. Korol' (speaking also for N.V. Markovich, T.I. Kolaravaya, S.I. Kalinina, N.M. Maynen, I.F. Zhil'evich, V.I. Kostomarov, N.M. Montikhina) gave a detailed description of laboratory and machine methods of producing photosemiconductive papers (zinc oxide was used). A.A. Sushchik (speaking also for I.I. Zhilevich, O.V. Gromov, V.A. Gordoyev, N.V. Fedotov and T.I. Ger) described a laboratory and industrial machine for producing photosemiconductive papers. T.I. Shishikina (speaking also for Ya.I. Okman) reported on a method of examining electrophotographic materials using an a/c bridge. S.I. Kozlov (speaking also for A.I. Gikens and S.S. Lichkovskii) spoke on developing materials for electrophotography and ferrography, including developers using a reverse image. B.M. Michonov reviewed methods of electrophotographing. Potentials of oscillating electrode measuring the thickness of the electrophotographic layer, stressing that the oscillating electrode should not be placed above a layer with varying potential at this causes self-discharge. V. Odipov and Ye. S. Kheyfets spoke on the practice of producing very thin papers in an electrolytic plant. They shared samples produced by the Grigishskaya paper factory. Ye. I. Kudirovsky then gave a historical review of the development of electrographic methods in which he paid tribute to the work of the Scientific Research Institute of Electrography in Vilnius and the Institut Polygraphique Mathtchoso matkhinos trojed'za (Ukrainian) Polygraphic Machine-building Institute (Kiev). Debates were then held.

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on Methods of Measuring the Potential of charged electro-photographic layers, the vibration pick-up most used was shown in B.I. Tikhonov's report to be not always accurate. S.G. Gerasimov reported that the had influence of the oscillating electrode can be eliminated if the electrode probe above its surface is fixed and the pick-up is connected to it by a twisted cable. In the debate on Fe.I. Neirovday's report it was noted that the research of Academician A.A. Toreain and I.P. Putseyko should be considered as the basis of all work on electrophotographic papers with  $\text{InO}_x$  as they were the first to show the possibility of optical sensitization of the internal photocell in  $\text{InO}_x$ . N.G. Gol'dvin then gave a report on the deposition of charges by a corona discharge. A.I. Enikolapov and A.P. Yushkevich reviewed some of the results of the use of electrographic methods in radiography. I.I. Kryukov (speaking also for I.I. Zhilevich, Yu. Yu. Vinogradov, V. V. Vlachukas and Yu. A. Zubtsev) reported on Relaxation processes in amorphous layers using a vibration potentiometer. Yu. K. Vlachukas gave a report on research on some physical properties of the polycrystalline layers of selenium and cadmium. M.P. Mikail'evich spoke on some of the photoelectric properties of  $\text{Si}2\text{S}_3$  and  $\text{Si}2\text{S}_3$ : the absorption maximum of the latter is about 900 m $\mu$ .

G.I. Dzhigal'yan spoke on methods of obtaining selenium light-sensitive layers, including sublimation and thermal treatment; it was also found that the sensitivity of the layers increased after storage for 1.5 to 2 months at room temperature. F.M. Polyakova (speaking also for S.G. Gerasimov) spoke on research into the electrical properties of electrophotographic layers of amorphous selenium and powdered zinc oxide. N.K. Shikarov (speaking also for A.S. Tsvetkov) discussed the production of selenium layers and some of their properties. Finally the following reports on ferromagnetic memory were delivered: 1) S. V. Farachevsky, "Electrodeposition of Magnetite" 2) V. V. Tsvetkov, "With Given Magnetic Characteristics" 3) V. V. Tsvetkov, "Visualization of Magnetic Circuit Images by Ferromagnetic Graphite" 4) V. V. Tsvetkov, "Ferromagnetic Recording of Pictures" 5) I. I. Buchik, "Shock Experiments in Non-Pressure Ferrromagnetic Thin-films". There was also an exhibition showing the work of the Electro-Photographic Institute. The most important conclusion of the conference was that a solid approach had been made to the possibility of wide technical use of the methods of electrography. It was considered that although work in this field actually started only in 1955-56 it has covered as much ground as the USSR in 10 years. While admitting that it was easier to reproduce results already achieved than to be the first to arrive there, the conference observed that the Americans took good care that no important information appeared in the literature available.

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SHILEYKO, A.V.

Using cold-cathode tubes as elements in high-speed relay circuits.  
(MIRA 11:4)  
Trudy MFI no.13:42-52 '53.

1. Moskovskiy energeticheskiy institut im. V.M. Molotova, Kafedra  
elektromatematicheskikh mashin.  
(Electron tubes) (Electric circuits)

SHILEYKO, A.V. [translator]; KOGAN, B.Ya., red.; SOLOMENETS'EV, Ye.D.,  
red.; LAGUTINA, I.M., tekhn.red.

[Digital differential analyzers] TSifrovye differentsiyal'nye  
analizatory. Moskva, Izd-vo inostr.lit-ry, 1959. 242 p.  
Translated from the English by A.V.Shileiko. (MIRA 12:8)  
(Electronic calculating machines)

SHILEYKO, A.V.; NESTEROVA, V.F., red.; PELEKH, M.A., tekhn. red.

[Digital differential analyzers] Tsifrovye differentsiyal'nye analizatory. Moskva, Vses. in-t nauchn. informatsii, 1961. 86 p.  
(MIRA 14:11)

(Electronic differential analyzers)

SHILEYKO, A.V. (Moskva)

Method of selecting an optimum structure for a digital analog  
computer. Avt. i telem. 22 no.1:89-96 Ja'61. (MIRA 14:3)  
(Electronic digital computers)

NASLEN, P.[Naslin, Pierre]; AVEN, O.I., kand. tekhn. nauk [translator];  
SHILEYKO, A.V., red.; SHIRIKOVA, M.M., tekhn. red.

[Principles of digital computer engineering] Osnovy tsifrovoi vychislitel'noi tekhniki. Moskva, Gosenergoizdat, 1962. 174 p.  
(Biblioteka po avtomatike, no.6)) Translated from the French.  
(MIRA 16:1)

(Electronic digital computers)

KOGAN, B.Ya., kand. tekhn. nauk, otv. red.; KOTEL'NIKOV , V.A.,  
kand. tekhn. nauk, red.; KHRAMOV, A.V., kand. tekhn.nauk,  
red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO,  
A.V., inzh., red.; SHILEYKO, T.I., red. izd-va; MAKUNI,  
Ye.V., tekhn. red.

[Combined (analog - digital) computers] Kombinirovannye vy-  
chislitel'nye mashiny; trudy. Moskva, Izd-vo Akad.nauk SSSR,  
1962. 294 p.  
(MIRA 16:4)

1. Vsesoyuznaya konferentsiya-seminar po teorii i metodam  
matematicheskogo modelirovaniya. 2d, Moscow, 1961.  
(Electronic computers)

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Pg-4 GG

EWT(d)/FCC(w)/BDS/T-2 ASD/ESD-3/APGC/IJP(C) Pg-4/Pk-4/Po-4/

ACCESSION NR: AT3001874

S/2906/62/000/000/0045/0058

AUTHORS: Kozyreva, G. M.; Shileyko, A. V.

77

TITLE: Structures of specialized digital computing machines 16C

SOURCE: Kombinirovannyye vychislitel'nyye mashiny; trudy II Vsesoyuznoy konferentsii-seminara po teorii i metodam matematicheskogo modelirovaniya.

Moscow, Izd-vo AN SSSR, 1962, 45-58

TOPIC TAGS: computer, digital, design

ABSTRACT: This theoretical paper investigates the problem of designing a digital computer (DC), that is, the selection of a finite number of elements of different types and the couplings between them. In the general case various such structures could be conceived, and it becomes necessary to evaluate them by introducing the concept of a "merit criterion," that is, a ratio of the effectiveness obtained thereby to the costs incurred. The effectiveness is expressed in terms of the amount of information processed by the DC per unit time. The cost factor is expressed through a concept termed "relative complexity," which is a single-valued function of the number and type of elements used and their mutual connections. The present work is an extension of A. V. Shileyko's work on the selection

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of the optimal structure of a digital model (Avtomatika i telemekhanika, v. 22, no. 1, 1961) which apply to the case of a fixed algorithm. The present paper undertakes the design of a specialized DC for the solution of systems of first-order ordinary differential equations. The study is limited to a single, fairly broad, class of numerical methods, namely, the extrapolation method. The method is developed, and an example is investigated. The example makes it evident that the first-order numerical method, or method of "rectangles," which is fairly frequently employed in digital differential analyzers, is the least suitable, since it does not yield any gain in speed and leads only to a lowering in effectiveness as compared with other numerical methods. The data obtained in an example can be readily expanded to the case of systems of differential equations. Orig. art. has 2 figures, 5 tables, and 29 numbered equations.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 11Apr63 ENCL: 00  
SUB CODE: CP, MM NO REF SOV: 003 OTHER: 002

Card 2/2

L.27249-65

ACCESSION NR: AT5003907

S/0000/64/000/000/0097/0106 9  
b7c

AUTHORS: Zhovinskiy, V. N.; Shileyko, A. V. (Candidate of technical sciences)

TITLE: On the frequency characteristics of linear operation blocks  
of digital models

SOURCE: Vsesoyuznaya konferentsiya-seminar po teorii i metodam mate-  
maticskego modelirovaniya. 3d, 1962. Vychislitel'naya tekhnika v  
upravlenii (Computer technology in control engineering); sbornik  
trudov konferentsii. Moscow, Izd-vo Nauka, 1964, 97-106

TOPIC TAGS: digital model, frequency characteristic, difference  
equation, finite computer

ABSTRACT: It is shown that in order to design a digital model to  
operate with other devices in real time it is possible, besides de-  
termining the operating speed of the digital model, to estimate the  
known properties of the model in the same manner as analog models are

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ACCESSION NR: AT5003907

considered, i.e., using ordinary differential equations. To this end the authors first define the frequency characteristics of a digital model which is described by some difference equation. The frequency characteristics are then derived for several types of most commonly used difference equations and a procedure is given for synthesizing a difference equation to satisfy a given frequency characteristic. The errors inherent in such methods are estimated. Orig. art. has: 2 tables, 3 figures, and 32 formulas.

ASSOCIATION: None

SUBMITTED: 17Aug64

ENCL: 00

SUB CODE: DP

NR REF SOV: 005

OTHER: 001

Card

2/2

KOGAN, B. Ya., kand. tekhn. nauk; SHILEYKO, A. V.

Theory and methods of mathematical modeling; 3rd thematic  
conference. Vest. AN SSSR 33 no.1:121-122 Ja '63.  
(MIRA 16:1)

(Mathematical models)  
(Cybernetics--Congresses)

SHILEYKO, A. V.

"Algorithms for digital analogs."

report submitted for 4th Intl Conf, Intl Assn for Analog Computation, Brighton,  
UK, 14-18 Sep 64.

KOGAN, B.Ya., doktor tekhn. nauk, otv. red.; KOTEL'NIKOV, V.A.,  
kand. tekhn. nauk, red.; FEL'DBAUM, A.A., doktor tekhn.  
nauk, red.; KHRAMOV, A.V., kand. tekhn. nauk [deceased];  
TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO, A.V.,  
kand. tekhn. nauk, red.

[Computer technology in control; collection of the trans-  
actions] Vychislitel'naia tekhnika v upravlenii; sbornik  
trudov. Moskva, Nauka, 1964. 221 p. (MIRA 17:12)

1. Vsesoyuznaya konferentsiya seminara po teorii i metodam  
matematicheskogo modelirovaniya. 3d, 1962.

EMPAKHER, Adam B.[Empacher, Adam B.]; KHATSYANOV, F.G.[translator];  
SHILEYKO, A.V., kand. tekhn. nauk, red.; LEVENSHTEYN,  
G.V., red.

[Power of analogies. Translated from the Polish] Sila  
analogii. Pod red. A.V.Shileiko. Moskva, Mir, 1965. 152 p.  
(MIRA 19:1)

KOZYREVA, G.M.; SHILEYKO, A.V.

Frequency characteristics of communication channels with high-order differential discrete modulation. Radiotekhnika 20 no.3 66-69 Mr '65. (MIRA 18:6)

1. Deystvitel'nyye chleny Nauchno-tehnicheskogo obshchestva radiotekhniki i elektrorvazii imeni Popova.

ACC NR: AP6017986

(N)

SOURCE CODE: UR/0413/66/000/010/0086/0086

INVENTOR: Bashilov, I. P.; Bulanzhe, Yu. D.; Dubovik, A. S.; Yerofeyev, V. I.; Kevlishvili, P. V.; Kobrin, L. V.; Kogan, B. Ya.; Kaz'min, A. I.; Popov, Ye. I.; Mikhaylov, N. N.; Churbakov, A. I.; Shileyko, A. V.

ORG: None

TITLE: An automatic device for determining acceleration due to gravity on a movable base. Class 42, No. 181833 [announced by the Institute of Physics of the Earth imeni O. Yu. Shmidt, AN SSSR (Institut fiziki Zemli AN SSSR)]

SOURCE: Izobreteniya, promyshlennye obraztsy, tovarnyye znaki, no. 10, 1966, 86

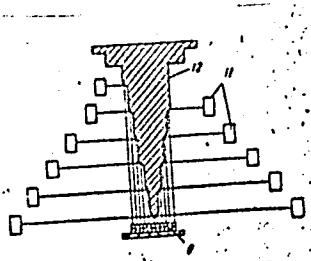
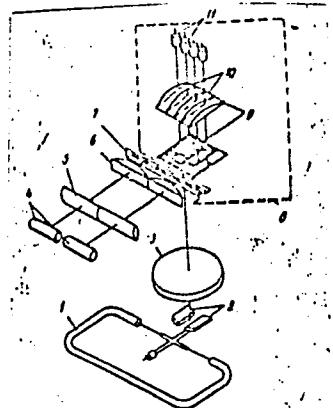
TOPIC TAGS: gravity, electron optics, electronic equipment, gravimeter

ABSTRACT: This Author's Certificate introduces an automatic device for determining acceleration due to gravity on a movable base, using a strongly damped elastic gravimeter system. The installation contains a meter for acceleration due to gravity, a system of mirrors, lens, light source, two condensers and a slotted prism. Accuracy of measurement is improved, and processing of the resultant information is automated by using an electron-optical converter which changes angles of turn of a pendulum to digital code. This converter is made in the form of a code mask with lenses attached. A prism is mounted behind the lenses with metallic mirrors and photocells.

UDC: 531.768.08:528.026

Card 1/2

ACC NR: AP6017986



1—accelerometer; 2—system of mirrors; 3—objective lens; 4—light source; 5 and 6—condensers; 7—slotted prism; 8—electron-optical converter; 9—code mask; 10—lenses; 11—photocells; 12—prism with metallic mirrors

SUB CODE: 09, 08/ SUBM I.TE: 14 May 64

Card 2/2

ACC NR: AR7004291

SOURCE CODE: UR/0274/66/000/011/A015/A015

AUTHOR: Kozyreva, G. M.; Shileyko, A. V.

TITLE: Detection and correction of errors in communication channels with the delta-modulation of the first and higher orders

SOURCE: Ref. zh. Radiotekhnika i elektronika i elektrosvyaz', Abs. 11A104

REF SOURCE: Sb. 2-ya Vses. konferentsiya po teorii kodir. i yeye prilozh. Sekts. 3. Ch. 2. M., b, g., 19-27

TOPIC TAGS: communication channel, error correction, error detection

ABSTRACT: Formulas are deduced which connect the parameters of a difference method of function presentation with the characteristics of the function being transmitted; the peculiarities introduced by detection and correction of errors are taken into account. The synchronous delta-modulation of the first and higher orders is analyzed; common synchronization for both receiving and transmitting ends facilitates the sub-division of transmitted sequence of signals into groups of n signals in each. When the information delay in the channel is admissible, the formula has this form:

$\omega_c r_i = \frac{k}{n} \sqrt{\varepsilon \frac{r+1}{r}}$ , where  $\omega_c$  - cutoff frequency of spectrum of function  $f(t)$ ;  
 $\varepsilon$  - maximum permissible error in the function transmission,  
 $r$  - function-difference order,  $n$  - number of digits in the

UDC: 621.391.1:519.2

Card 1/2

ACC NR: AR7004291

signal group, k - number of information digits,  $\tau_1$  - interval between input signals. If the delay is inadmissible, the formula is:

$$\omega_c \tau_1 = \frac{1}{2n} \sqrt{s \frac{r+1}{r} \frac{2k}{q}},$$

where q - error coefficient,  $\tau_2$  - interval between signals in the communication channel. Two figures.

Two tables. Bibliography of 5 titles. L. S.

[Translation of abstract]

SUB CODE: 09, 17

Card 2/2

KRAYZMER, Leonid Pavlovich. Prinimali uchastiye: CHERVINSKIY, M.M.; OBO-  
RENGO, A.Ye., SHILEYKO, R.I.; ZAYEZDNYY, A.M., retsenzent; UL'YANOV,  
G.K., red.; SOBOLEVA, Ye.M., tekhn. red.

[Discrete information storage devices] Ustroistva khraneniia diskret-  
noi informatsii. Moskva, Gos.energ.izd-vo, 1961. 359 p. (MIRA 14:12)  
(Magnetic memory (Calculating machines))  
(Pulse techniques (Electronics))

KUZMIN, M.P.; SHILENKO, F.I., red.

[Die trical simulation of some nonsteady thermal proces-  
ses] Elektromodelirovanie nekotorykh nestatsionarnykh  
teplovykh protsessov. Moskva, Izd-vo "Energija," 1964.  
119 p.

SHILEYKO, V. A.

SHILEYKO, V. A.- "Effect of Length of Birth and Postnatal Period on the Earlier Periods of Lactation." Khar'kov Med Inst, Khar'kov, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

SOV/112-58-1-214D

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 28 (USSR)

AUTHOR: Shilgan, V.

TITLE: Problems of Speeding Up and Reducing Costs of Construction of Heating-and-Power Stations in Czechoslovakia (Voprosy uskoreniya i udeshevleniya stroitel'stva teplovyykh elektrostantsiy v Chekhoslovakii)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Economic Sciences, presented to Leningrad finans.-ekon. in-t (Leningrad Finance and Economics Institute), Leningrad, 1956.

ASSOCIATION: Leningrad finans.-ekon. in-t (Leningrad Finance and Economics Institute)

1. Power plants--Construction    2. Power plants--Cost    3. Power plants--Czechoslovakia

Card 1/1

S/119/62/000/001/007/011  
D201/D302

AUTHOR: Shil'gan, V.A.

TITLE: New programmed drive controllers

PERIODICAL: Priborostroyeniye, no. 1, 1962, 22 - 23

TEXT: The author describes briefly, and gives technical data of ЭПП (EPP) and ЭМП (EMP) instruments modified with programmed drive controllers, in which programming is obtained by a cam, rotated by the synchronous motor of the instrument through an additional variable reduction gear rotating the bank of position control switches. The programmed drive is added to automatic electronic instruments EPP-07, EMP-57, ЭМП-57 (EMP-57I) and EMP-67 used for measurement and recording, and for programmed two- or three-position control of production processes. The instruments can also measure, record and produce programmed electrical signals. The automatic electronic balanced d.c. bridge EMP-57I is used in conjunction with a resistive thermometer in explosion-sensitive materials inside the category B-1 (V-1) or B-1A (V-IA) space. The following is the ad-

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New programmed drive controllers

S/119/62/000/001/007/011  
D201/D302

ditional technical specification of modified EPP and EMP instruments: % drive error  $\pm \pm 0.75\%$ ; calibration of the program tape in % of controlled quantity = 0 - 100; the angle of lowering of the cam not less than  $29^\circ$ ; the angle of lift of the cam profile not less than  $36^\circ$ ; the time of full revolution of the program cam at the velocity of movement of the diagram of 60 mm/hr.: 1; 2; 4; 6; 8; 12; 24; 36; 48; 72; 96 and 120 [Abstractor's note: Units not given]; mains supply 220 V, 50 c/s; operating ambient temperature range 0 -  $50^\circ\text{C}$  and relative ambient humidity 30 - 80 %. The instruments are now in production at one of the factories of the Leningrad Sovnar-khoz. There are 2 figures.

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L 114829-66 EWA(j)/T/EWA(b)-2 JK  
ACC NR: AP6008345

SOURCE CODE: CZ/0049/65/000/003/0230/0234

42

B

AUTHOR: Shilgankova, Lyudmila-Silhankova, L.

ORG: Department of Biology, Institute for Chemical Technology, Prague

TITLE: Differences of the relative contents of cytochromes in the cells of R-  
and S- mutants of saccharomyces

SOURCE: Biologia, no. 3, 1965, 230-234

TOPIC TAGS: saccharomycetes, plant metabolism, plant genetics, absorption  
spectrum, plant physiology

ABSTRACT:

Absorption spectra in the visible range of light of the whole cells of R- and S- mutants were studied. Aerobically cultivated cells of the mutants did not differ in cytochromed content, but they differ in Q<sub>O2</sub> in the presence of sugars. Cytochromes not reduced by dithionite showed a ratio of 1 : 1 of reduced cytochromes b and c in the cells of rough mutants, while the smooth forms had a ratio of 2.3 : 1. In anaerobic cultivation smooth mutants showed a typical anaerobic spectrum of bands of cytochrome b<sub>1</sub>; the rough mutants had the aerobic spectrum with bands of cytochromes b and c; only the

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L 14829-66

ACC NR: AP6008345

band of cytochromes a + a<sub>3</sub> was absent. The ratio of cytochromes b : c was 3 : 1 in this case. The inability of the rough mutant to show an anaerobic spectrum is explained by the inability of this mutant to grow under anaerobic conditions. Orig. art. has: 4 figures.  
[JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 005

Fw  
Card 2/2

KORTNEV, A.V.; RUBLEV, Yu.V.; SHIL'GORIN, F.A.; TSESLER, B.I.

Photoelectronic method for determining the stressed state of models  
using the photoelasticity technique under both dynamic and static  
conditions. Zav. lab. 31 no.9;1119-1122 '65. (MIRA 18:10)

1. Odesskiy politekhnicheskiy institut i Odesskiy zavod pressov.

SHIL'GORIN, F.A.; RADCHIK, V.S.

A friction machine with separate measurement of specimen wear.  
Zav. lab. 31 no.2:237-239 '65. (MIRA 18:7)

1. Odesskiy gidrometeorologicheskiy institut.

NIKOLAYEV, A.G.; SHILIKHINA, N.I.

Variability of chemical characters in *Mentha sachalinensis*. Report No.2:  
Variability in free transpollination. Trudy po khim. prirod. soed. no.3:  
57-64 '60. (MIRA 16:2)

1. Kishinevskiy gosudarstvennyy universitet. Laboratoriya biokhimii  
efironosov.  
(Mint (Botany)) (Plants—Chemical analysis) (Botany—Variation)

SHILIKOVA, L.G., otv. za vypusk; BODROVA, V.A., tekhn.red.

[Classified plan of literature on river transportation to be published during 1959] Tematicheskii plan vypuska literatury po rechnomu transportu na 1959 god. Moskva, Izd-vo "Rechnoi transport," 1958. 43 p. (MIRA 13:1)

1. Vsesoyuznoye ob"yedineniye knizhnay torgovli.  
(Bibliography--Inland water transportation)

SOV/98-59-10-8/20

14(6)  
AUTHORS:

Fokeyev, V.S., Candidate of Technical Sciences, and Shilimov, A.I.,  
Engineer

TITLE: An Experiment in the Exploitation of Vortex Eddies on the Burdz-  
harskaya GES

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 10, pp 30-31 (USSR)

ABSTRACT: The article describes vortex funnels installed in the Burdzharskaya  
GES in 1952, which enable drift ice to pass the turbines in winter  
and sludge to be cleared away from the sluice-gates in the summer.  
The delivery basin in this GES is 10 m broad, consisting of 2  
chambers 6.4 m deep and 3.7 m broad, which are provided with  
sluice-gates and a sludge-removing machine (capacity .8 m<sup>3</sup>); a  
drift-ice deflector is also installed at the entry to the delivery  
basin. Prior to the use of the vortex funnels the ice penetrated  
as far as the delivery chambers, whence it had to be removed by  
hand or mechanically. Attempts to allow the ice to pass the tur-  
bine by means of increasing the speed proved a failure, but the  
introduction of vortex funnels considerably improved the winter

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SOV/98-59-10-8/20

An Experiment in the Exploitation of Vortex Eddies on the Burdzharskaya GES

performance of the GES. The air temperature in the winter of 1956-57 dropped to  $-15^{\circ}$  -  $20^{\circ}\text{C}$ , but an 80% ice-content in the stream-flow was passed without difficulty. The figure on page 31 shows a diagram of the installation, which involved a flat eddy-forming shield 7 m high and 1.7 m broad, which could be raised above the water-level by means of a 5-ton hoist. When the shield is placed in position, eddies are set up which immediately lower the percentage of ice passed to 40%. In the event of heavier ice-flows the boom device shown in the diagram can be lowered 2.5-3 m to effect a drop in front of the sluice-gate of 40-50 cm by means of a 1.5 ton crane, the traveling speed of which is 15 m/min, and the lifting speed 5 m/min; a powerful eddy is thus caused, which drives the ice through the gate into the turbine and crushes the ice against the grille. The 7 m long eddy-former consists of a wood and metal casing, and a 150 mm long metal tube is installed in front of the chamber in line with the current, its ends being fixed to concrete bulkheads, as a reinforcement to the eddy-forming shield. The method employed on the Burdzharskaya GES in the summer is

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SOV/98-59-10-8/20

An Experiment in the Exploitation of Vortex Eddies on the Burdzharskaya GES

for the sludge, consisting of lumps 40-50 cm thick, to be crushed by means of the eddy-former and then removed by the sludge-dredging machine; this crushing process takes 5-8 minutes. There is 1 diagram.

Card 3/3

SHLIMOVICH, V.D., inzh.

Consideration of losses in power system networks in calculating  
their economic modes of operation using analog computers. Trudy  
VNIIE no.18:76-87 '64. (MIRA 18:6)

SHILIN, A., kand.tekhn.nauk (Sverdlovsk)

Improve technological processes by all means. NTO 2 no.1:15  
Ja '60. (MIRA 13:5)

1. Predsedatel' Ural'skogo pravleniya nauchno-tekhnicheskogo  
obshchestva tsvetnoy metallurgii.  
(Ural mountain region--Metallurgical research)

SHILIN, A., PETRUKHIN, I., YEPIFANOV, M. and FILATOV, A. (Reviewers)

"A valuable handbook - Mozgov, I.E. "Farmakologiya" [Pharmacology].  
M., Sel'khozgiz, 1961. 3rd revised and enlarged edition..."  
Veterinariya, vol. 39, no. 3, March 1962 pp. 87

KOZLOV, F.R.; KOSYGIN, A.N.; ZASYAD'KO, A.E.; NESMEYANOV, A.N.; ANTROPOV, P.Ya.;  
YELYUTIN, V.P.; RUDAKOV, A.P.; KIRILLIN, V.A.; TOPCHIYEV, Al-dr V.;  
BLAGONRAVOV, A.A.; SHEVYAKOV, L.D.; SHILIN, A.A.; MEL'NIKOV, N.V.;  
KRASHIKOVSKIY, G.V.; TOPCHIYEV, A-y V.; BOYKO, A.A.; BRATCHENKO, B.F.;  
GRAFOV, L.Ye.; KUZ'MICH, A.S.; KRATENKO, I.M.; MAN'KOVSKIY, G.I.;  
PLAKSIN, I.N.; AGOSHKOV, M.I.; SPIVAKOVSKIY, A.O.; POCHENKOV, K.I.;  
KRASOZOV, I.P.; KOZHEVIN, G.V.; LINDENAU, N.I.; KUZNETSOV, K.K.

Academician A.A. Skochinskii; obituary. Bezov. truda v prom. 4 no.11:  
18-19 N '60.  
(MIRA 13:11)  
(Skochinskii, Aleksandr Aleksandrovich, 1873-1960)

ZASIMOV, Nikolay, F., starshiy slesar'; KULAGIN, N.K.; SHILIN, A.A.;  
KISELEV, V.N.; LYSYKH, M.I.

Working day of seven hours. Elek.i tepl.tiaga 14 no.3:29  
Mr '60 (MIRA 13:7)

1. Dizel'-agregatnaya brigada zagotovitel'nogo tsekha depo  
Likhobory Moskovskoy dorogi:  
(Nizhniye Likhobory—Railroad workers)  
(Hours of labor)

KHRUSHCHEV, N.S.; PODGORNYY, N.V.; ZASYAD'KO, A.F.; RUDAKOV, A.P.; KAZANETS, I.P.; SHILIN, A.A.; MEL'NIKOV, N.V.; BURMISTROV, A.A.; SHEVCHENKO, V.V.; MAYAKOV, L.I.; ROZENKO, P.A.; KUZ'MICH, A.S.; ZADEMIDKO, A.N.; BRATCHENKO, B.F.; STRUYEV, A.I.; KRASNIKOVSKIY, G.V.; BOYKO, A.A.; KAGAN, F.Ya.; USKOV, A.A.; VLADYCHENKO, I.M.; TOPCHIYEV, A.V.; DEGTYAREV, V.I.; KHUDOSOVVTSEV, N.M.; GRAFOV, L.Ye.; IVANOV, V.A.; KRATENKO, I.M.; GOLUB, A.D.; IVONIN, I.P.; SAVCHENKO, A.A.; ROZHCHENKO, Ye.N.; CHERNEGOV, A.S.; MARKELOV, M.N.; LALAYANTS, A.M.; GAPONENKO, F.T.; POLUEKTOV, I.A.; SKLYAR, D.S.; PONOMARENKO, N.F.; POTAPOV, A.I.; POLYAKOV, N.V.; SUBBOTIN, A.A.; POLSTYANOY, G.N.; TRUKHIN, P.M.; TKACHENKO, A.G.; OSTRÖVSKIY, S.B.; NYRTSEV, M.P.; DYADYK, I.I.; SHPAN'KO, T.P.; RUBCHENKO, V.P.

Kondrat Ivanovich Pochenkov; obituary. Sov. shakht. 11 no.9:  
48 S '62. (MIRA 15:9)  
(Pochenkov, Kondrat Ivanovich, 1905-1962)

SHILIN, A.F., inzhener.

IG-9 automatic machine for preparing peat-humus pots. Sel'khozmashina  
no.1:15-16 Ja '54. (MLRA 7:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystven-  
nogo mashinostroyeniya. (Agricultural machinery)

SHILIN, A.I., starshiy elektromekhanik

Automatic cut-in of high tension after run-up of gas-filled  
rectifier tubes. Avtom., telem. i sviaz' 2 no.12:29 D '58.  
(MIRA 11:12)

1.Mogilevskaya distantsiya signalizatsii i svyazi Belorusskoy dere-  
gi.

(Electric current rectifiers)

SHUMENKOVA, Yuliya Makarovna; SHILIN, Aleksey Karpovich; MESEZHNIKOV, M.S.,  
nauchnyy red.; NEVEL'SHTEYN, V.I., vedushchiy red.; ZHIKHAREVA,  
M.Ya., tekhn.red.

[Key wells of the U.S.S.R.; Maksimkin Yar key well (Tomsk Province)]  
Opornye skvazhiny SSSR; Maksimkin-IAraskaia opornaia skvazhina  
(Tomskaia oblast'). Leningrad, Gos.nauchno-tekhn.izd-vo neft. i  
gorno-toplivnoi lit-ry. Leningr. otd-nie, 1961. 129 p. (Leningrad.  
Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi  
institut. Trudy, no.166). (MIRA 14:12)

(Maksimkin Yar region--Petroleum geology)  
(Maksimkin Yar region--Gas, Natural--Geology)

S/009/60/000/008/004/005  
B027/B076

AUTHORS: Gurova, T. I., Kostenko, M. A., Shilin, A. K.

TITLE: Lithology and reservoir properties of the rocks of the Tyumen' layer in the southeastern part of the West Siberian Lowland

PERIODICAL: Geologiya nefti i gaza, no. 8, 1960, 23-27

TEXT: On the basis of investigations of the structures and morphology of the Mesozoic deposits in the West Siberian Lowland as well as of the study of core samples from numerous borings it was ascertained that the sand-silt rocks in the Lower and Middle Jurassic (Tyumen' layer) are the most interesting as possible oil and gas reservoir rocks. In all investigated cross sections this layer shows coal-bearing continental sediments with alternating gravel, sandstone, silt, argellites. In view of the lithological composition and the physical properties of the rock species it can be assumed that various reservoir rocks are present. According to the classification of P. P. Avdusin and M. A. Tsvetkova

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Card 1/2

Lithology and reservoir properties ...

S/009/60/000/008/004/005  
B027/B076

(1943-1947) reservoir rocks of the classes B, C, D, E distributed over three zones exist. In the first zone, in the region of Omsk, Tatarsk, Kamyshlovo, Belogorka, the most promising reservoir rocks as regards oil are those of the classes D and C, more rarely of class B. In the second zone there are reservoir rocks of class D near Zav'yalovo, Sargatskoye, Aleksandrovo, Chulym. In the third zone sand-silt reservoir rocks of the class E, seldom D, are in the vicinity of Tebiss and Barabinsk. In conclusion it can be said that the accumulating properties of the rocks in the Tyumen<sup>i</sup> layer of the West Siberian Lowland are connected with the mineralogical composition of the clastic part of the rocks and their grain and with the type and quantity of cement. In the studied region a regular distribution of oil and gas reservoir rocks was ascertained and the first and second zones are suitable for the search for oil and gas. There are 1 figure, 1 table, and 2 Soviet-bloc references.

ASSOCIATION: Novosibirskoye territorial'noye geologicheskoye upravleniye  
(Novosibirsk Territorial Geological Administration)

Card 2/2

MIKITENKO, A.M.; SHILIN, A.M.

Continuous track on reinforced concrete blocks. Put' i put.  
khoz. 4 no. 12:7-8 D '60. (MIRA 13:12)

1. Glavnnyy inzhener sluzhby puti, g.Kiyev (for Mikitenko).
2. Nachal'nik tekhnicheskogo otdela sluzhby puti, g.Kiyev (for Shilin).

(Railroads--Track)

SHILIN, A.M.

Track maintenance forces of the Darnitsa Division. Put' i put.khoz.  
6 no.5:7 '62. (MIRA 15:4)

1. Nachal'nik tekhnicheskogo otdela sluzhby puti, g. Kiyev.  
(Railroads--Employees) (Railroads--Maintenance and repair)

SHILIN, A.M.

Applying the total of forces and knowledge. Put' i put.khoz. 6 no.6:  
10-11 '62. (MIRA 15:7)

1. Nachal'nik tekhnicheskogo otdela Kiyevskoy distantsii puti Yugo-Zapadnoy dorogi.  
(Railroads—Maintenance and repair)

MIKITENKO, A.M.; SHILIN, A.M.; SERGEYEVA, A.I., inzh., red.;  
VOROTNIKOVA, L.F., tekhn. red.

[In the struggle for communist labor] V bor'be za kommu-  
nisticheskii trud; opyt raboty Darnitskoi distantsii puti.  
Moskva, Transzheldorizdat, 1963. 20 p. (MIRA 16:5)  
(Kiev--Railroads) (Efficiency, Industrial)

SHILIN, A.M. (Kryer)

New achievements of a collective. Publ i put. Khoz. 9 no. 1323  
(MTRB 18c2)  
665

SHILIN, A.M.

Improving their qualifications. Put' i put. khoz. 9 no.2:21 '65.  
(MIRA 18:7)

- SHILIN, A. M.

Copper Mines and Mining

Changing underground mining of copper pyrite to strip mining. Gor. zhur. no. 5, May 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, August 1952. Uncl.

ROZHNOVSKIY, A.A.; SHILIN, A.N.; LATSKIY, V.I.

Conference on problems of increasing labor productivity. Gor.zhur.no.8:  
60 Ag '56. (Mine management) (MIRA 9:10)

SHILIN, A.N.

Basic trends in planning nonferrous metal open pit mines. Trudy  
Unipromedi no.2:102-118 '57. (MIRA 11:11)  
(Mining Engineering) (Strip mining)  
(Nonferrous metals)

SHILIN, A.N.

Technological planning and organization of new industrial production.  
Avt. i trakt. prem. no.5:3-8 My '57. (MIRA 10:6)

1. Ger'kovskiy avtozavod imeni Molotova.  
(Automobile industry)

SHILIN, A.N.

Use of haulage by truck in open cut mining. Trudy Unipromedi  
no.2:238-247 '57. (MIRA 11:11)  
(Strip mining) (Mine haulage) (Dump trucks)

SHILIN, A.N.

Truck haulage in open cut copper ore mines of the Urals. Trudy  
Unipromedi no.2:248-272 '57. (MIRA 11:11)  
(Ural Mountains--Copper mines and mining) (Strip mining)  
(Mine haulage)

SHILIN, A. N. Cand Tech Sci -- (diss) "Analysis of the operation and means for further perfection of the automobile transport in copper-ore quarries of the Urals." Sverdlovsk, 1958. 24 pp ( Acad Sci USSR. Ural Affiliate),  
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KEL'NIK, V.P., red.izd-va; ZEF, Ye.M., tekhn.red.

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pit mining] Mekhanizatsiya gornykh rabot; podzemnye i  
otkrytye raboty. Izd.2., perer. i dop. Sverdlovsk, Gos.  
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1. Unipromed', Sverdlovsk.  
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1. Gorno-geologicheskiy institut Ural'skogo filiala Akademii nauk, Sverdlovsk (for Zubrilov). 2. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut mednoy promyshlennosti, Sverdlovsk (for Shilin). 3. Gosudarstvennyy nauchno-tehnicheskiy komitet Soveta Ministrov USSR (for Zelinskiy).

(Iron mines and mining) (Ore dressing)

VASIL'YEV, M.V., gornyy inzh.; KOTOV, V.N., gorayy inzh.; RUSSKIY, I.I.,  
gornyy inzh.; KHOKHRYAKOV, V.S., gornyy inzh.; POPOV, S.L.,  
gornyy inzh.; SHILIN, A.N., gornyy inzh.; TARAN, M.I., gornyy inzh.;  
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N. V. Mel'nikov. Gor. zhur. no.11:78-79 N '62.  
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KARCHENKO, A.K., SHILIN, A.N.

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the Degtyarsk copper mine. Gor. zhur. no.3:13-15 Mr. '63.  
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SHILIN, A.N., kand.tekhn.nauk

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mines. Gor. zhur. no.5:5-8 My '63. (MIRA 16:5)

*Chief Engineer*  
1. Glavnnyy inzh. Ural'skogo nauchno-issledovatel'skogo i proyektnogo  
instituta mednoy promyshlennosti.  
(Mining engineering—Technological innovations)

MEL'NIKOV, N.V.; SLEDZYUK, P.Ye.; ZAV'YALOV, S.S.; BUNIN, A.I.;  
VASIL'YEV, M.V.; NOVOZHILOV, M.G.; ZURKOV, P.E.; IL'IN, M.V.;  
VILESOV, G.I.; POPOV, S.I.; SANDRIGAYLO, N.F.; SHILIN, A.N.;  
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SHILIN, A. P.

"The Artillery Observer" (Artilleriyskiy Razvedchik). DOSAAF Press. Moscow, 1952.

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CIA-RDP86-00513R001549420011-4"

BRODOVICH, Nikolay Vladimirovich; GORCHILIN, Viktor Vasil'yevich; SHILIN,  
Andrey Petrovich; BOCHARNIKOVA, K.N., inzhener, redaktor;  
~~VETINA, G.P.~~, tekhnicheskiy redaktor.

[Testing and magnetic inspection of important railroad car parts]  
Ispytanie i magnitnyi kontrol' otvetstvennykh vagonnykh detalei.  
Moskva, Gos.transp.zhel-dor.izd-vo, 1955. 126 p. (MLRA 8:11)  
(Railroads--Cars)

L 27477-66 EWT(1)/T IJP(c)  
ACC NR: AT6008420

SOURCE CODE: UR/3158/65/000/021/0001/0012

AUTHOR: Zolotukhin, V. G.; Kutuzov, A. A.; Broder, D. L.; Kham'yanov, L. P.; <sup>98</sup>  
Yefimenko, B. A.; Shilkin, A. S. <sup>B1</sup>

ORG: None

TITLE: Analysis and generalization of the correlation method of measuring the  
particle lifetime distribution in a physical system

SOURCE: Odninsk. Fiziko-energeticheskiy institut. Doklady, no. 21, 1965, Analiz  
i obobshcheniye korrelyatsionnogo metoda izmereniya raspredeleniya vremeni zhizni  
chastits v fizicheskoy sisteme, 1-12

ABSTRACT: The authors present a complete statistical analysis of the correlation  
method of measuring the distribution of the lifetime of particles in a linear  
physical system. The method is reduced to a determination of the mutual correla-  
tion function between a pseudorandom signal used to modulate the intensity of the  
measured particles coming from the source, and the counting rate of the detectors.  
It is shown that the statistical accuracy of the method depends both on the off-  
duty factor of the modulating random signal and on the presence of a noise back-

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ground against which the measurements are made. In particular, it is shown that the conclusions made by T. E. Stern et al. (J. of Nucl. An., p.A/B, 16, 499, 1962) that the use of random (or pseudorandom) excitation can completely reduce the measurement time compared with the classical method (ordinary periodic excitation) is valid only when there is an appreciable background. When there is no background, on the average the statistical accuracy of the classical and correlation methods is approximately the same. A new method of pseudorandom modulation of the particle source is proposed, to take advantage of this fact. If the modulation is made coherent with the background noise, then it can be readily shown that the fast component of the background can be readily eliminated in the same manner as in the classical method, and the slow component can be eliminated by suitable choice of the off-duty factor of the modulating signal. This type of statistical modulation prevents loss of the peak value of the modulated intensity and thus permits the use of the peak power of the source and retain the favorable advantages of the correlation method. Orig. art. has: 6 figures and 13 formulas.

SUB CODE: 20/ SUBM DATE: 00/ OPIG REF: 001/ OTH REF: 002

Card 2/2 BLQ

PARCHINSKIY, O.Ch., prepodavatel'; SHILIN', A.V. [Silins A.], proroktor

Torsion of the omasum and abomasum in cows. Veterinariia 41  
no.6; '77-78 Je '64.  
(MIRA 18:6)

1. Latviyskaya sel'skokhozyaystvennaya akademiya.

SHILIN, B.

Improve the quality of diesel engine repairs. Rech. transp.  
23 no.7:39-40 Jl '64. (MIRA 17:10)

1. Nachal'nik tekhnicheskogo otdela Stavropol'skogo  
sudoremontno-mekhanicheskogo zavoda.

SHILIN, B., prepodavatel'

Audiovisual aids in electrical engineering. Prof.-tekh. obr.  
22 no.7;21 Jl '65. (MIRA 18:8)

1. Gorodskoye professional'no-tehnicheskoye uchilishche No.2,  
g. Yaroslavl'.

3(4)

AUTHORS: Shilin, B. A., Engineer, Ozol, L. P., SOV/154-59-2-7/22  
Acting Docent

TITLE: On the Automatic Alidade KA-5-VTS (O kipregele - avtomate  
KA-5-VTS)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i  
aerofotos"yemka, 1959, Nr 2, pp 41-45 (USSR)

ABSTRACT: The deficiencies found in alidades used today are pointed out in the present paper. Also the alidade with the altimeter devised by G. Yu. Stodolkevich exhibits a number of major deficiencies which are likewise enumerated here. The collective of the enterprise took up the task of designing an automatic alidade maintaining all the advantages offered by the Stodolkevich alidade with altimeter, and without the deficiencies mentioned. The result of the works carried on over ten years was the small automatic alidade KA-5-VTS and it was found to be good. The construction characteristics of the instrument are given here. It combines all the main structural parts of a common alidade with vertical circle with those of an alidade with an altimeter attachment VKS-7. The vertical circle allows angles to be measured up to  $\pm 30^\circ$ .

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On the Automatic Alidade KA-5-VTS

SOV/154-59-2-7/22

reading being made on a one-minute vernier. A computer of the friction type makes it possible to determine automatically the marks of the sighting points at any required distances and inclination angles up to  $\pm 15^\circ$ . The computer and the verticle circle work simultaneously, thus making it possible to check the work of the automatic counter at any time and, when necessary, to pass over to inclination angle measurements. The principal data of the alidade are given, followed by a description of the instrument. The new computer was tested in the laboratory and despite field-like conditions no wear was detected on the surface of the porcelain plate nor of the counter roller flange. The new instrument weighs only half the constructions hitherto used and may be employed with or without a distance plate. Experiments made have all been checked and have been found to be satisfactory by all field workers. There are 3 figures.

ASSOCIATION: Latviyskaya sel'skokhozyaystvennaya akademiya  
(Latvian Agricultural Academy)

Card 2/2

GAVRICHKOV, Fedor Stepanovich; SHILIN, Boris Alekseyevich;  
LYAKHOV, G.M., kand. tekhn. nauk, retsenzent; SMIRNOV,  
L.V., ottv. red.

[Miner of horizontal and inclined workings] Prokhodchik  
gorizontal'nykh i naklonnykh gornykh vyrabotok. Moskva,  
Nedra, 1965. 235 p.  
(MIRA 18:7)

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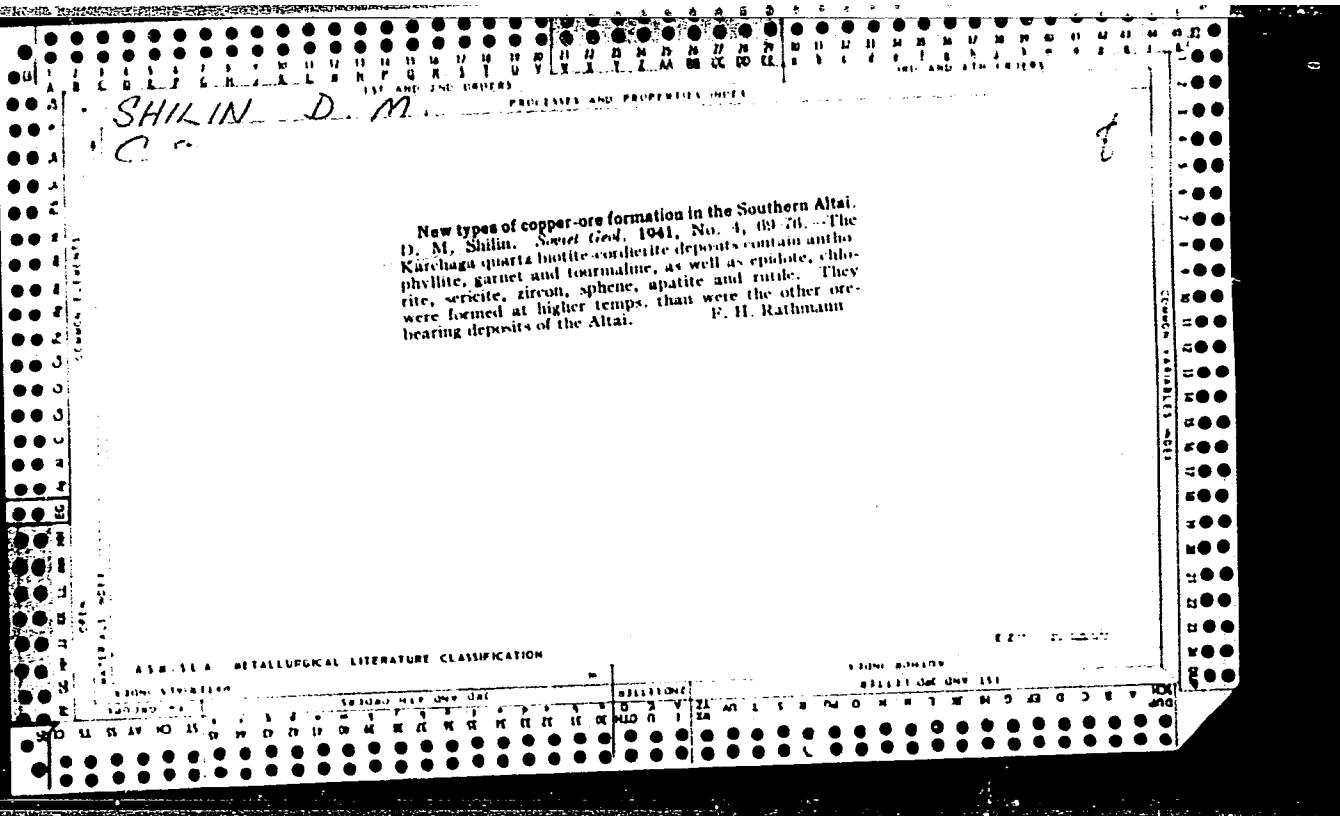
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SHILIN, B.V.

Evaluating the quality of aerogeophysical surveying. Razved.  
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CIA-RDP86-00513R001549420011-4"



SHILIN D.M.

CD

Cordierite norites of the Kok-Arche mountains in the Southern Altai. D. M. Shilin. Zapiski Vsesoyuz. Mineral. Obshchestva (Mem. soc. russe mineral.) [2] 70, 230-40 (1947). - In the outer parts of the Kok-Arche Mountains hybrid cordierite rocks are observed which originate from the assimilation of biotite-quartz schists by gabbro-diorite magma. The metamorphic rocks contain actinolite schists rich in amphibole with sericitized or prehnitized plagioclase and irregular amounts of epidote, sphene, and magnetite. Secondary amphibole (rounded growths perpendicular to the plagioclase grains) is observed in intergrowths continuous with the plagioclase grains. There are continuous transitions of olivine gabbro to ophiitic gabbro or diabase, the hybrid character of which is demonstrated by xenomorphic quartz intergrowths (up to 0.8%). The hybrid contact rockware usually dark-colored, streaky, of two principal kinds: an amphibole- and apatite-rich type, and a more gabbro-enriched type with a streaky structure, containing augite, intermediate plagioclase, apatite, and sphene. The assimilation products of the cordierite norite, rather coarse granular, of "granulitic structure." They contain hypersthene, cordierite, plagioclase, biotite, xenomorphic quartz in variable amounts, apatite, magnetite, tourmaline, and rutile as accessories. The origin of cordierite in these hybrid gabbros is wholly unusual, since normally it is assoc. with contacts of W. Bitel granites with cryst. schists.

SHILIN, D.M.

USSR/ Minerals - Mineralogy

Card 1/1      Pub. 22 - 31/43

Authors : Shilin, D. M.

Title : Quartz-aegirite granite-porphyry (grorudite) from the Aginsk region of eastern Transbaikal

Periodical : Dok. AN SSSR 106/1, 119-122, Jan 1, 1956

Abstract : Geological-mineralogical data are presented on the discovery of a (grorudite) quartz-aegirite granite-porphyry mineral in some regions of eastern Transbaikal, USSR. The chemical properties of the mineral are listed. Six Russ. and Soviet references (1901-1951). Table; illustrations.

Institution : All-Union Scientific Res. Geological Inst.

Presented by: Academician D. S. Korzhinskiy, July 29, 1955